



March 12, 2008

MEMORANDUM TO: Apex File

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FROM: Paul Glader

SUBJECT: **Progress Report No. 46 for period ending February 29, 2008; Pond 2 Final Closure - Apex Site, Washington County, Utah**

Summary

The monthly visual inspection, per the long term monitoring plan, was conducted on February 16. No unusual conditions were noted, however the area continues to receive above average winter precipitation. The north side gulying continues to develop – as described below the erosion will be repaired as soon as site conditions permit.

Per the September 2007 report, the St. George area received in excess of 2 inches of rain later in September. The site appeared to have received much less, however a minor amount of gulying has occurred on the northeast side of the area. Doug Gibbs, MEI, was on site during October 2007 to review conditions. Doug noted minor erosion at three locations on the NE side of the impoundment. Doug Gibbs mobilized a contractor for erosion repair during the week of February 4, however conditions were found to be too wet to conduct repair activities and the contractor was demobilized until the site dries out. Doug Gibbs will be on site to supervise.

Discussion

1. Surface Monitor Results To Date – The settlement monitoring monuments were surveyed by Alpha Engineering on December 13. Since monitoring of the top surface began (Jan 4, 2006), there has been no appreciable movement in the surface monuments at the Apex site. There are no concerns to date with settlement. As expected with long-term consolidation, the data shows that settlement rates are decreasing over time.
2. Surface Monitor Survey Data Review – Based on the data collected through December 2007, the elevation of the reclaimed impoundment top surface has in general continued to decrease very slightly. Settlement rates have in general stayed consistent during 2007.

Work Planned for Next Period

1. Visual Inspection of site.
2. Settlement monument survey – quarterly basis.

Sampling and Analysis in Period

Field Tests, Inspections & QA/QC

1. The monthly post closure site inspection was done on February 16; a copy of the inspection report is included in the Supplemental Attachments section.

Cost and Schedule

Committed costs in February 2008 were \$275. Total project to date committed is approximately \$1,248,000. The cost report for February is attached.

Current status of the deliverables listed in the RCRA 7003 order includes:

Deliverable	Reference Paragraph	Due	Remarks
Post warning signage around perimeter of site	57	15 days after effective date of order	Work completed on March 9, 2004
Begin implementation of closure plan	63	45 days after receipt of filing of order	Work started on February 23, 2004
Monthly progress reports	64	28th day after close of month	Requirement in effect after order is filed.
Completion report	66	30 days after completion of all closure plan tasks	Construction completion report submitted on 3/13/2006. A follow-up report to be issued after end of monitoring period.

The update of the schedule milestones includes:

Milestone	Target	Actual	Remarks
Issue bid package – Phase I (Sump Drains)	6/14/04	6/15/04	Portion of RFP materials issued at pre-bid on 6/14/04; remainder sent via courier
Issue RFP package – Phase III	6/24/04	6/24/04	
Award contract for Phase I	6/24/04	6/29/04	Date contract was shipped to Hughes
Pre-bid meeting – Phase III	7/19/04	7/19/04	
Start Phase I (Sump Drains) construction	7/12/04	7/19/04	
Start Phase II (Evaporation)	7/19/04	7/29/04	
Receive bids for Phase III	8/2/04	8/2/04	
Re-bid Phase III contract package	April 2005	4/27/05	Date bid package was sent to Hughes
Start Phase III construction	End of August 2005	8/29/05	Start of contractor mobilization
Complete Phase III construction	Dec 23rd 2005	12/23/05	Completion of contract scope of work
Issue Construction Completion Report	Week of 3/13/2006	3/13/06	

Supplemental Attachments

1. February 16, 2008 long term inspection report, by D. Truman.
2. February 2008 cost report.

Annual Site Inspection Summary Sheet - Apex Site - Pond 2

Hecia Mining Company - Long-Term Maintenance and Monitoring Plan

Form 1 of 4 - Summary

Date: <u>2-16-08</u>			
Inspector: <u>Truman</u>			
Cover System Component	Potential Problem	Allowable Limits	Limits Potentially Exceeded
Site Perimeter	Erosion or Fencing Issues	NA	NA
Cover System (outslopes, top, rock)	Subsidence	Minor: ponding < 1" some gullying / erosion	Yes <u>X</u> * No <u> </u>
		Significant: see Table 2	Yes <u> </u> * No <u>X</u>
	Embankment Slope Stability	excessive movement or surface cracks > than 1"	Yes <u> </u> * No <u>X</u>
	Gullying	on top	depth > 1" <u> </u> * No <u>X</u>
		at embankment crest or on outslope	depth > 2" <u> </u> * No <u>X</u>
		w/in normal flow channel in diversion channel	no gullying allowed <u> </u> * No <u>X</u>
		w/in diversions at toe of impoundment outslope	no gullying allowed <u> </u> * No <u>X</u>
		in diversion channel at any other location	NA <u> </u> * No <u> </u>
	Erosion Protection Stability	rock subsiding or missing	Yes <u> </u> * No <u>X</u>
	Seepage	no colored seepage allowed (red, blue, yellow w/ crystallization)	Yes <u> </u> * No <u>X</u>
Runoff Control System	Diversion Channel	rock in place, channel not moving, fence stable	Yes <u>X</u> * No <u> </u>
	Diversion Swales	rock in place, no silting in or head cutting	Yes <u>X</u> * No <u> </u>
	Excessive silt build up at fence lines in diversion channel	allowed if not effecting cover system	Yes <u>X</u> * No <u> </u>

* Mark all areas of concern or requiring repairs on attached site map.

Annual Site Inspection - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

Form 2 of 4 - Site Perimeter

Inspection Date: <u>2-16-08</u>	
Inspector: <u>J. Runman</u>	
Visible Outlying Areas	
Observed Condition:	<u>Looked good</u>
Observed Damage:	<u>None</u>
May require repair: Yes ___ * No ___	
Property Boundary Fence and Gate (walk fence line)	
Observed Condition:	<u>Fences & Signs need some work.</u>
Observed Damage:	<u>Gate loose wires on fence Signs need heavier wire</u>
Potential Corrective Actions:	<u>I will fix.</u>
May require repair: Yes ___ * No ___	
All Upgradient Areas (areas that drain onto property)	
Observed Condition:	<u>Fine</u>
Observed Damage:	<u>None</u>
May require repair: Yes ___ * No ___	

* Mark all areas of concern or requiring repairs on attached site map.

Annual Site Inspection - Apex Site - Pond 2

Hecla Mining Company - Long-Term Maintenance and Monitoring Plan

Form 3 of 4 - Impoundment

Inspection Date: <u>2-16-08</u> Inspector: <u>T. R. R. R.</u>			
Outslopes			
Observed Performance:	Rock Cover Subsidence:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Excessive Slope Movement (failure):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Gully Development:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Observable Leachate (colored):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Excessive Siltation (at slope toe):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Observed Damage: <u>Gully development on North side</u>			
Potential Corrective Actions: <u>Repair</u>			
Top (top surface soils)			
Observed Performance:	Cracking (>1" width):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Settlement / Evidence of Ponding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Erosion / Gullyng:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Observed Damage:			
Potential Corrective Actions:			
Erosion Protection Layer (rock)			
Observed Performance:	Rock Staying in Place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Rock Subsiding:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Missing Rock:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Observed Damage:			
Potential Corrective Actions:			

Mark all areas of concern or requiring repairs on attached site map.

Annual Site Inspection - Apex Site - Pond 2

Hecia Mining Company - Long-Term Maintenance and Monitoring Plan

Form 4 of 4 - Diversion Channel and Swales

Date: <u>2-16-08</u>			
Inspector: <u>J. [Signature]</u>			
Diversion Channel			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Normal Flow Channel in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Encroaching on Site Fencing:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			
Diversion Swales			
Observed Performance:	Erosion Protection in place:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Flow Channel Silting In:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	Head Cutting:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	May require repair: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Observed Damage: <u>None</u>			
Potential Corrective Actions: <u>None</u>			

Mark all areas of concern or requiring repairs on attached site map.

Activity	2004 Budget	Revised Budget May 2004	Committed Cost this Period	Cumulative Committed Cost To Date 2-29-08	Forecasted Cost To Complete	Forecasted Final Cost	Remarks on Forecast to Complete
Phases I through III (Completed February 2006)							
Phase I - Drain Excess Liquid From Tailings	189,200	72,700		67,928	0	67,928	
Phases II, IIA + IIB - Evaporate Excess Liquid	6,000	8,000		242,882	0	242,882	
Phase III - Regrading & Final Cover System	337,000	342,050		504,742	0	504,742	
Field Indirect Costs	164,500	213,568		378,517	0	378,517	Includes Jan + Feb 2006 long term monitoring costs
Heda Costs	18,700	18,700	0	33,324	0	33,324	
Subtotal Phases I through III	715,400	655,018	0	1,227,393	0	1,227,393	
Long Term Monitoring (through FY 2010)							
Site Inspections			275	4,661	2,594	7,255	
Settlement Monitoring				4,725	5,400	10,125	
Consultant Support:							
Annual Geotechnical Engineer Inspections			0	2,495	18,100	20,595	Includes settlement monitoring data analysis
Vegetation Monitoring			0	0	20,000	20,000	Allowance for surveys in FY 2008 - 2010
Site Conditions Review - MEI			0	4,332	5,469	9,801	
Site Conditions Review - SVL Analytical			0	2,079			
Maintenance:							
Erosion Repair Allowance			0	0	7,500	7,500	
Overseeding Allowance			0	0	9,920	9,920	
Heda Project Management Costs:							
Labor			0	2,266	7,909	10,175	
Travel expenses			0	0	1,312	1,312	
Subtotal Long Term Monitoring	0	0	275	20,558	78,204	96,683	
Total Pond 2 Final Closure	715,400	655,018	275	1,247,951	78,204	1,324,076	